

THE TYPES OF SOME AMERICAN *CERCERIS* WITH LECTOTYPE
DESIGNATIONS (HYMENOPTERA: PHILANTHIDAE)¹

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Abstract.—The primary types of 37 species-group taxa of American *Cerceris* are discussed, and lectotypes are designated for 32 species-group taxa. Four previously designated neotypes are shown to be invalid, and three holotypes are identified.

As part of a study of North American and Caribbean wasps of the genus *Cerceris* the primary types of most of the described taxa have been studied. Cresson (1916, 1928), Scullen (1965, 1972), and Ferguson (1983) designated lectotypes for many species, most of which are located in type repositories in the United States. Most of the lectotypes designated in this paper involve species described by F. Smith, Saussure and Cameron and are located in European institutions. In a few cases the specimens comprising a syntype series are not conspecific; in other cases the specimens of a syntype series are located in more than one institution. All lectotypes and holotypes discussed herein agree with the original descriptions unless otherwise noted. The synonymy and taxonomic status of the species discussed below will be treated in a forthcoming synonymic list. Abbreviations used in the text for type repositories are explained in Acknowledgments.

Cerceris acolhua Saussure, 1867:90.

Described from at least two males from "Mexico. In planitie alta (terris frigidis), . . ." and from "provincia Mechoacan". A male in Geneva labelled "Mexico t.f." is here designated lectotype. A second conspecific syntype male in Vienna is rather badly damaged.

Cerceris azteca Saussure, 1867:97.

Described from eight females from Cuantla and two females from Orizaba, Mexico. A female in Vienna bearing a "Cuantla t.c." label, a printed red

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"Type" label, a handwritten "*Cerceris azteca* Sauss." label, and an "azteca Type det. Sauss." label is here designated lectotype.

Cerceris bakeri Cameron, 1904:67.

Described from an unstated number of females from "Chinandega, Nicaragua". A female in the BMNH labelled "Chinandega, Nicaragua, Coll. Baker" is here designated lectotype. It also bears a circular red margined "Type" label, a printed "Cameron Coll. 1904-313" label, a handwritten "3055" label, a handwritten "*Cerceris bakeri* Cam. Type Nicaragua" label, and a printed "B. M. Type Hym. 21.1, 371" label. Scullen (1972) saw a second female at Pomona College, but it has not been found in the USNM where most of the Baker collection of Hymenoptera is now housed.

Cerceris binodis Spinola, 1841:117.

Described from two males from Cayenne, French Guiana. Two conspecific syntype males are in the Spinola collection in Torino. These have been standing under the header label "*Philanthus binodis* m., *Didesmus Spinolae* Dlbm., D. Buquet, M. Le Prieur". The specimens are otherwise unlabelled. The larger of the two specimens is here designated lectotype.

Cerceris bothriophora Schletterer, 1887:456.

Described from an unstated number of both sexes from "Reg. V. Subreg. 3. (Mexico)". One female and two males in Vienna bear handwritten "*bothriophora* det. Schletterer" labels. These specimens agree with the original description including the fact noted by Schletterer, that the fossette present on tergum I of the female is absent in the males. The female also bears the labels "Withm." and "Newhaven" (handwritten and almost illegible). It is a specimen of *Cerceris atramontensis* Banks, a common species in the area of New Haven, Connecticut. Scullen (1972) designated and labelled this specimen neotype, but this designation is rejected as invalid since it was not shown that the original syntype series was lost or irretrievably damaged. Although not from Mexico, the female agrees with the original description, and it seems clear that Schletterer thought it was from a Mexican locality.

One male is labelled "Georg. Am. 1877 II" and is a specimen of *Cerceris compar* Cresson. Although the specimen agrees with the rather incomplete original description, the possibility exists that it is not a syntype because of the locality label.

The second male has a handwritten "Aug." label and a printed "Bilimek, Mexico, 1871" label with an illegible handwritten word below the printing. This specimen also agrees with the original description and is here designated lectotype, since the label agrees with the type locality given in the original description.

Cerceris chinandegaensis Cameron, 1904:66.

Described from an unstated number of males from Chinandega, Nicaragua. Scullen (1972) saw four males: one each at BMNH and Cornell, and

two at Pomona College. I have seen three conspecific males: one each at the BMNH, Cornell, and the Baker collection now at the USNM. The second male from Pomona College reported by Scullen has not been located. The three specimens examined are labelled "Chinandega, Nicaragua, Coll. Baker". The BMNH specimen bearing a circular, red margined "Type" label, a printed "Cameron Coll. 1904-313" label, a handwritten "3054" label, a handwritten "*Cerceris chinandegaensis* Cam. Type Nicaragua" label, and a printed "B. M. Type Hym. 21.1, 374" label is here designated lectotype.

The USNM specimen bears a "*Cerceris kennicottii bakeri* Cameron det. H. A. Scullen" label. The Cornell specimen bears a printed "Cornell U. Lot 546 Sub 207 Baker Coll." label, and a "*Cerceris kennicottii* Cresson det. H. A. Scullen" label.

Cerceris clypeata Dahlbom, 1844:221.

Described from both sexes from "Carolina meridionali . . . Dr. Zimmerman". Number of specimens not stated. A female and male in Lund are not conspecific. The female bears a handwritten "105" label, a "E. Sudcarolina Zimmerman" label, an unmarked red label, and a blue "1982-402" label. It is here designated lectotype. The male bears a handwritten "104" label, a "S. Carolina" label, a "*Cer. clypeata* Kl. Mus. Berol." label, and a blue "1982-403" label. It is a male of the homeochromic *Cerceris halone* Banks.

Cerceris cribrosa Spinola, 1841:119.

Described from two females and one male from Cayenne, French Guiana. I have studied a syntype female and a conspecific male syntype from the Spinola collection in Torino. Scullen (1972) designated the female as neotype, but this designation is invalid since a syntype cannot become a neotype. I here designate the same female as lectotype. The male has the gaster missing beyond the first segment.

Cerceris crotonella Viereck and Cockerell, 1904:139.

Described from one female from Las Cruces, New Mexico. Cresson (1928) does not list this species. A female in the type collection of the ANSP from Las Cruces, N. Mex. bears a handwritten "*Cerceris crotonella* V. & C." label and is accepted as the holotype. Cresson's ledger in the ANSP has a line drawn through his entry No. 10039, *C. crotonella* with the notation "off in coll. Ckll". The number 10039 is not on the specimen. Apparently the specimen was subsequently returned to the ANSP collection.

Cerceris crucis Viereck and Cockerell, 1904:139.

Described as *Cerceris rufinoda* var. *crucis* from two females from Las Cruces, New Mexico. This taxon is not listed by Cresson (1928). The specimen in the type collection at ANSP bears a "Las Cruces, N. M." label and a handwritten "*Cerceris rufinoda* var. *crucis* V. & C. Type" label, and it is here designated lectotype. The second specimen has not been located. Scullen

(1965) was incorrect in stating that the type of *crucis* carried the ANSP No. 10393 as this number applies to quite a different wasp (see Cresson, 1928, p. 42). The lectotype does not bear an ANSP type number.

Cerceris deserta Say, 1825:343.

Scullen's (1965, p. 479) statement designating a neotype for this species is not clear as to whether he or Banks made the designation. Neither the labels on the specimen nor Banks' (1912) only published reference to *deserta* give any indication that he designated a neotype. The specimen [MCZ] carries a neotype label affixed by Scullen, although it also bears a *Cerceris deserta* Say determination label apparently in Banks' handwriting. The neotype designation is clearly that of Scullen (1965).

Cerceris dilatata Spinola, 1841:118.

Described from two females and one male from Cayenne, French Guiana. I have examined a syntype female and a conspecific syntype male from the Spinola collection in Torino. Scullen (1972) designated the male as neotype, but this designation is invalid since a syntype cannot become a neotype. The female is here designated lectotype, since it is the more distinctive of the two sexes.

Cerceris elegans F. Smith, 1856:467.

Described from an unstated number of males from "Hab. East Florida (coll. E. Doubleday, Esq.)." Two conspecific males in the BMNH are each labelled "E. Doubleday, St. John's Bluff, E. Florida." One male bearing a circular orange margined "Type" label, a handwritten "*elegans* Sm. Type" label, and a printed "B. M. Type Hym. 21.1 365" label is here designated lectotype. The second male has the gaster missing beyond the first segment.

Cerceris exsecta F. Smith, 1873b:410.

Described from an unstated number of both sexes from "Hab. Mexico." I have examined one female syntype and three conspecific males from the BMNH. The female bearing a small circular "Mex." label, a handwritten "*Cerceris exsecta* Smith" label, a circular orange margined "Type H. T." label, and a "B. M. Type Hym. 21.1, 429" label is here designated lectotype. One male labelled "Mex" is probably a syntype. A second male bears a "F. Smith Coll." label, and the third male has a "Smith Coll. pres. by Mrs. Farren White, 99-303" label. Both carry a "Mexico" locality label, but it is questionable whether or not they are syntypes.

Cerceris feralis Cameron, 1890:113.

Described from an unstated number of males from "Hab. Mexico (coll. Saussure)". I have examined six conspecific males from the BMNH of which two are probably not syntypes. A male bearing a "Cuantla t.c." label, a circular orange margined "Type H. T." label, a handwritten "*Cerceris feralis*

Cam. Type B.C.A. ii, 113" label, and a printed "B. M. Type Hym. 21.1 372" label is here designated lectotype. Two males labelled "Cuantla t.c." and one labelled "Mexiq. Orizaba" each bears a "P. Cameron Coll. 1914-110" label. The italicized type face of the locality labels indicates that they are from the Saussure collection; these are accepted as syntypes. Two males each bearing a "N. Yucatan Gaumer" label and a "Cameron Coll. B. M. 1914-110" label are not from the Saussure collection and are probably not syntypes. The latter two specimens each bears a "*Cerceris compar geniculata* Cam. det. H. A. Scullen" label.

Cerceris flavida Cameron, 1890:116.

Described from an unstated number of both sexes from "Hab. Mexico, Cordova (Coll. Saussure)." A female in the BMNH bearing a "Cordova t.c." locality label, a circular blue margined "Syntype" label, a handwritten "*Cerceris placida* [sic] Cam" label, and a "Syntype *Cerceris flavida* Cam. det C. R. Vardy" label is here designated lectotype of *Cerceris flavida* Cameron. Despite the "*placida*" label the specimen has the aberrant wing venation described by Cameron in the original description. The second cubital cross vein is missing on the left front wing but represented by a stub on the right front wing. The first cubital cross vein is partially missing on the right front wing.

Cerceris flavomaculata Cameron, 1890:115.

Described from an unstated number of both sexes from "Hab. Costa Rica, Rio Susio, Cache (Rogers)." A female and a male syntype in the BMNH are not conspecific. The female bearing a circular blue margined "Syntype" label, a printed "R. Susio, H. Rogers" label, and a printed "B.C.A. Hymen. II *Cerceris flavomaculata* Cam." label is here designated lectotype. The male bears a circular blue margined "Syntype" label, a circular orange margined "Type" label, a printed "Cache, Costa Rica, H. Rogers" label, a printed "B. C. A. Hymen. II, *Cerceris flavomaculata* Cam." label, a handwritten "*Cerceris flavomaculata* Cameron, Type, B. C. A. ii, 115" label, and a printed "B. M. Type Hym. 21.1, 376" label. The specimen is without a gaster and very dirty. The portions of the specimen that can be clearly seen indicate that it is a male of *Cerceris cooperi* Scullen.

Cerceris geniculata Cameron, 1890:113.

Described from an unstated number of females from "Hab. Mexico, Cuantla (Coll. Saussure)." A female in the BMNH bearing a "Cuantla, t.c." locality label, a "P. Cameron Coll. 1914-110" label, and a handwritten "*Cerceris geniculata* Cam." label is here designated lectotypes. A second conspecific female bears a "Mexiq. Orizaba" label, a "P. Cameron Coll. 1914-110" label, a red margined circular "Type H. T." label, a "B. M. Type Hym. 21.1, 366" label, and a handwritten "*Cerceris geniculata* Cam. Type B. C. A. ii,

113" label. The Orizaba locality was not mentioned in the original description.

Cerceris hebes Cameron, 1890:124.

Described from the male from "Hab. Mexico, Chilpancingo in Guerrero 4500 feet (H. H. Smith)". Number of specimens not stated. A male in the BMNH bears a "Valladolid, Yucatan, Gaumer" label, a printed "B. C. A. Hymen. II *Cerceris hebes* Cam. Type" label, and a handwritten "(? locality G.C.C.)" label. A head glued to the thorax is that of *Eucerceris montana* Cresson (= *Cerceris sonorensis* Cameron) and is not conspecific with the remainder of the specimen. The pygidium agrees with the figure accompanying the original description and is sufficient to identify the thorax and gaster as that of a male of *Cerceris graphica* F. Smith. The thorax and gaster is accepted as the holotype despite the discrepancy in the locality label of the specimen versus the locality stated in the original description. The locality label on the specimen was "questioned by G. C. C." Nevertheless the species is identifiable from the original description and accompanying figures.

Cerceris intricata F. Smith, 1856:459.

Described from an unstated number of males from "Hab. Brazil (Santarem). (Coll. H. W. Bates)". A male in the BMNH bearing a blue circular handwritten "Braz. Santarem" label, a circular orange margined "Type" label, a handwritten "*intricata* Sm. Type" label, a printed "B. M. Type Hym. 21.1, 407" label, and a "Syntype. Another at Oxford prob. conspecific. det. C. R. Vardy 1976" label is here designated lectotype. A second conspecific male in the BMNH bears a "Para" label, a blue handwritten "*intricata* Smith" label, and a "Smith coll. pres. by Mrs. Farren White 99-303" label, but it is probably not a syntype.

Cerceris krugi Dewitz, 1881:200.

Described from five specimens of both sexes from Puerto Rico. One female and two male syntypes, all conspecific, from Berlin have been studied. The female bearing a green "Portorico Krug" label; a red, printed "TYPE" label; a white printed "22041" label; and a green, handwritten "*krugii* [sic] Dewitz" label is here designated lectotype.

One male has a green "Portorico Moritz" label; a red, printed "TYPE" label; a white "4439" label; and a green "*krugii* [sic] Dewitz" label. The second male is similarly labelled, and, in addition, has a large, green, handwritten "*krugi* Dewitz, Berliner ent. Zeit. XXV" label. The latter specimen has the head and tergum VII badly damaged. The location of the remaining two syntypes is not known.

Cerceris laevigata F. Smith, 1856:465.

Described from both sexes from Santo Domingo. Number of specimens not stated. A syntype female and conspecific syntype male in the BMNH

are labelled "St. Dom. 55.1". The female bearing a circular orange margined "Type" label, a handwritten "*laevigata* Sm. Type" label, and a printed "B. M. Type Hym. 21.1, 377" label is here designated lectotype. The left hind leg is glued to a point. The male bears only the locality label.

Cerceris montezuma Cameron, 1890:108.

Described from an unstated number of females from "Hab. Mexico (coll. Saussure)". There are four specimens in the BMNH under this name of which two are conspecific females and agree with the original description. The female bearing a handwritten "Mex. Mayo [and an illegible word]" label, a "P. Cameron Coll. 1914-110" label, and a handwritten "*Cerceris montezuma* Cam." label is here designated lectotype. A second conspecific female has a handwritten "Mex." label, a printed "F. Sm. Coll. 79.22" label, and a handwritten "*montezuma*" label. Since the F. Smith collection was not mentioned in the original description, the lectotype may in fact be a holotype. However, the F. Smith collection was available to Cameron, and it seems prudent to make the lectotype designation.

A third female bears a "Omiteme, Guerrero, 8000 ft. Aug. H. H. Smith" label, a "P. Cameron Coll. 1914-110" label, a "in B. M. 1973 under *C. graphica*" label, and a handwritten "*montezuma*" label. It does not agree with the original description, but it is a specimen of *Cerceris dreisbachi* Scullen.

The fourth specimen consists of a thorax and part of the gaster on a pin with a head and the remaining part of the gaster glued to the second label. It is a male of which the head appears to be that of *Cerceris californica* Cresson and the remaining parts appear to be *Cerceris erythropoda* Cameron. It bears a "Presidio, Mexico, Forrer" label, a printed "B. C. A. Hymen. II, *Cerceris montezuma* Cam." label, a handwritten "probably wrongly named GCC" label, and a handwritten "*Cerceris montezuma* Cam. Type, B. C. A. iii, 108" label. The composite specimen bears no resemblance to the original description.

Cerceris nigra Ashmead, 1900:227.

Described from two females from "St. Vincent-Windward side" [B. W. I.]. A female in the USNM bears a printed "Windward side St. Vincent, W. I., H. H. Smith" label, a red "Type No. 6410 USNM" label, and a handwritten "*Cerceris nigra* Ashm. Type" label. It is here designated lectotype. A second female in the BMNH also carries a handwritten "*Cerceris nigra* Ashm. Type" label. I have not seen it, but according to comments received from C. R. Vardy (pers. comm.) it is conspecific.

Cerceris obsoleta Cameron, 1890:118.

Described from an unstated number of females from "Hab. Mexico, Teapa in Tabasco (H. H. Smith)". Two conspecific females in the BMNH each

bears a Teapa, Tabasco, locality label. One bearing a "Teapa, Tabasco, March H. H. S." label, and a printed "B. C. A. Hymen. II *Cerceris obsoleta* Cam." label is here designated lectotype. The second specimen is very dirty and bears a "Teapa, Tabasco, Feb. H. H. S." label, a circular orange margined "Type" label, and a handwritten "*Cerceris obsoleta* Cam. Type B. C. A. ii 118" label.

Cerceris otomia Saussure, 1867:99.

Described from five males from "... urbis Mexico" and "Zinapécuaro in provincia Mechoacan", and three females and six males from "... Cordillera orientali . . ." A female in Vienna bearing a "Mexico, Saussure, Type 1880" label, a handwritten "*otomia* Type det. Sauss." label, and a printed red "Type" label is here designated lectotype.

Cerceris pullata F. Smith, 1873a:105.

Described from two females from "Hab. St. Paulo". Two conspecific syntype females in the BMNH each bears a blue circular "St. Paul" label. One of these bearing an orange margined circular "Type" label, a handwritten "*Cerceris pullatus* [sic] Smith" label, and a printed B. M. Type Hym. 21.1, 409" label is here designated lectotype. The second female bears only the locality label. A third conspecific female bears a handwritten "*Cerceris pullatus* Smith St. Paulo" label and a printed "Smith coll. pres. by Mrs. Farren White 99-303" label, but it is probably not a syntype.

Cerceris rufopicta F. Smith, 1856:467.

Described from an unstated number of males from "Hab. E. Florida". Two male syntypes in the BMNH are conspecific. One specimen bearing a circular orange margined "Type H. T." label, a circular white label with illegible markings on both sides, a printed "R. Foster, St. John's Bluff, E. Florida" label, a handwritten "*rufopicta* Sm. Type" label, a circular blue margined "Syntype" label, and a "B. M. Type Hym. 21.1, 364" label is here designated lectotype. The second male bears a small handwritten "'71" label, a printed "E. Doubleday, St. John's Bluff, E. Florida" label, a handwritten "*rufopicta* Smith" label, a printed "Smith Coll. pres. by Mrs. Farren White, 99-303" label, and a circular blue margined "Syntype" label.

Cerceris simplex F. Smith, 1856:462.

Described from an unstated number of both sexes from "Hab. Brazil (Santarem), (Coll. H. W. Bates)". A female in the BMNH bearing a blue circular handwritten "Santarem" label, a circular orange margined "Type" label, a handwritten label with illegible marks, a handwritten "*simplex* Sm. Type" label, and a printed "B. M. Type Hym. 21.1, 438" label is here designated lectotype. A male syntype has not been located.

Cerceris simulans Saussure, 1867:87.

Described from a male from "Mexico Temperata: in Cordillera orientali". The type has not been located. A headless female in Geneva was designated neotype by Scullen (1972), but this designation is invalid since the original description was based on a male and the headless female disagrees with the original description in several important respects. Furthermore, *C. simulans* Saussure is readily identifiable from Saussure's original description and figures. The headless female is identifiable as *Cerceris scapularis* Schletterer which belongs to quite a different species group from *C. simulans*.

Cerceris smithiana Cameron, 1890:119.

Described from an unstated number of females from "Hab. Mexico, Atoyac in Veracruz (H. H. Smith)". Two conspecific females in the BMNH each bears an "Atoyac, Veracruz, May. H. H. S." label and a printed "B. C. A. Hymen. II *Cerceris smithiana* Cam." label. One of these is here designated lectotype. The second specimen also bears a circular orange margined "Type" label, a handwritten "*Cerceris smithiana* Cam. Type B. C. A. ii 119" label, and a printed "B. M. Type Hym. 21.1, 369" label, but it is very dirty.

Cerceris strigosa Cameron, 1890:110.

Described from an unstated number of both sexes from "Hab. Mexico, Ciudad in Durango 8100 feet (Forrer)". Two conspecific females in the BMNH each bears a "Ciudad Mex., 8100 ft., Forrer" label, a printed "B. C. A. Hymen. II *Cerceris strigosa* Cam." label, and a handwritten *Cerceris strigosa* Cam." label. One of these also bears a circular orange margined "Type" label and a notation on the handwritten label "Type B. C. A. ii 110", and it is here designated lectotype. It is also the cleanest of the two specimens.

Cerceris subpetiolata Saussure, 1867:95.

Described from "Mexicanus ager. Terrae calidae", "In Puebla viejo apud Tampico" two males, and "Cordillera orientalis" one female. A female in Vienna bearing a "Saussure type 880" label, a "Cordova t.c." label, a "*subpetiolata* type det. Sauss." label, and a red printed "Type" label is here designated lectotype. A conspecific syntype male bears a "Cordova t.c." label, a "Saussure type 880" label, and a "*subpetiolata* det. Sauss." label.

Cerceris townsendi Viereck and Cockerell, 1904:140.

Described from a male from Las Cruces, New Mexico. The species is not listed in Cresson (1928). A male in the type collection of the ANSP bears a "Las Cruces, N. M." label, a red "Type No. 10389" label, and a handwritten "*Cerceris acanthophiloides* V. & C." label. Cresson's ledger at the ANSP contains the entry "*C. xanthophiloides* [sic] V. & C." under his number 10389. The specimen agrees in all details of structure and coloration with the original description of *C. townsendi*, and I have no doubt that this

specimen is the holotype. Apparently Viereck and Cockerell changed the name in publication and neglected to change the label on the specimen. I have affixed a label to the specimen indicating that I consider it to be the holotype of *Cerceris townsendi*.

Cerceris truncata Cameron, 1890:121.

Described from an unstated number of both sexes from "Hab. Mexico, Temax in North Yucatan (Gaumer)". I have seen six females and four males from the BMNH. All are conspecific, and all are apparently syntypes. One female and two males each bears a "Temax, N. Yucatan, Gaumer" label; and five females and two males each bears a "N. Yucatan, Gaumer" label. Each of the ten specimens bears a printed "B. C. A. Hymen. II *Cerceris truncata* Cam." label. The female labelled "Temax, N. Yucatan, Gaumer" is here designated lectotype since the locality label agrees precisely with the original description. One female labelled "N. Yucatan, Gaumer" also bears a circular orange margined "Type" label, a "B. M. Type Hym. 21.1, 433" label, and a handwritten "*Cerceris truncata* Cam. Type" label, but it is in rather poor condition.

Cerceris vulpina F. Smith, 1856:463.

Described from an unstated number of males from "Hab. Brazil". A male in the BMNH bearing a blue circular "Santarem" label, a circular orange margined "Type" label, a handwritten "*vulpina* Sm. Type" label, and a printed "B. M. Type Hym. 21.1, 418" label is here designated lectotype. A second conspecific male bears a circular white handwritten "Braz." label, a handwritten "*C. vulpina* Sm." label, and a printed "Smith coll. pres. by Mrs. Farren White 99-303" label, but it may not be a syntype.

Cerceris zapoteca Saussure, 1867:89.

Described from two males from "prope Tampico". A male in Vienna bearing a "Cordova t.c." label, a handwritten "Saussure Type 1880" label, a handwritten "*zapotecus* [sic] Type det. Sauss." label, a handwritten "*Cerceris zapotecus* [sic] Sss." label, and a red printed "Type" label is here designated lectotype. A second conspecific male in the BMNH with the same locality label is the presumed second syntype.

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